

[0017] FIG. 7 representatively illustrate a schematic plan view of another alternative leakage prevention element used in conjunction with any of the articles of FIGS. 1-4.

[0018] Repeat use of reference characters in the present specification and drawings is intended to represent the same or analogous features or elements of the present disclosure. The drawings are representational and are not necessarily drawn to scale. Certain proportions thereof can be exaggerated, while others can be minimized.

DETAILED DESCRIPTION

[0019] Within the context of this specification, each term or phrase below includes the following meaning or meanings:

[0020] “Attach” and its derivatives refer to the joining, adhering, connecting, bonding, sewing together, or the like, of two elements. Two elements will be considered to be attached together when they are integral with one another or attached directly to one another or indirectly to one another, such as when each is directly attached to intermediate elements. “Attach” and its derivatives include permanent, releasable, or refastenable attachment. In addition, the attachment can be completed either during the manufacturing process or by the end wearer.

[0021] “Bond” and its derivatives refer to the joining, adhering, connecting, attaching, sewing together, or the like, of two elements. Two elements will be considered to be bonded together when they are bonded directly to one another or indirectly to one another, such as when each is directly bonded to intermediate elements. “Bond” and its derivatives include permanent, releasable, or refastenable bonding.

[0022] “Coform” refers to a blend of meltblown fibers and absorbent fibers such as cellulosic fibers that can be formed by air forming a meltblown polymer material while simultaneously blowing air-suspended fibers into the stream of meltblown fibers. The coform material can also include other materials, such as superabsorbent materials. The meltblown fibers and absorbent fibers are collected on a forming surface, such as provided by a foraminous belt. The forming surface can include a gas-pervious material that has been placed onto the forming surface.

[0023] “Connect” and its derivatives refer to the joining, adhering, bonding, attaching, sewing together, or the like, of two elements. Two elements will be considered to be connected together when they are connected directly to one another or indirectly to one another, such as when each is directly connected to intermediate elements. “Connect” and its derivatives include permanent, releasable, or refastenable connection. In addition, the connecting can be completed either during the manufacturing process or by the end wearer.

[0024] “Disposable” refers to articles that are designed to be discarded after a limited use rather than being laundered or otherwise restored for reuse.

[0025] The terms “disposed on,” “disposed along,” “disposed with,” or “disposed toward” and variations thereof are intended to mean that one element can be integral with another element, or that one element can be a separate structure bonded to or placed with or placed near another element.

[0026] “Elastic,” “elasticized,” “elasticity,” and “elastomeric” mean that property of a material or composite by virtue of which it tends to recover its original size and shape after removal of a force causing a deformation. Suitably, an elastic material or composite can be elongated by at least 50

percent (to 150 percent) of its relaxed length and will recover, upon release of the applied force, at least 40 percent of its elongation.

[0027] “Extensible” refers to a material or composite that is capable of extension or deformation without breaking, but does not substantially recover its original size and shape after removal of a force causing the extension or deformation. Suitably, an extensible material or composite can be elongated by at least 50 percent (to 150 percent) of its relaxed length.

[0028] “Fiber” refers to a continuous or discontinuous member having a high ratio of length to diameter or width. Thus, a fiber can be a filament, a thread, a strand, a yarn, or any other member or combination of these members.

[0029] “Hydrophilic” describes fibers or the surfaces of fibers that are wetted by aqueous liquids in contact with the fibers. The degree of wetting of the materials can, in turn, be described in terms of the contact angles and the surface tensions of the liquids and materials involved. Equipment and techniques suitable for measuring the wettability of particular fiber materials or blends of fiber materials can be provided by a Cahn SFA-222 Surface Force Analyzer System, or a substantially equivalent system. When measured with this system, fibers having contact angles less than 90 degrees are designated “wetable” or hydrophilic, and fibers having contact angles greater than 90 degrees are designated “nonwetable” or hydrophobic.

[0030] “Join” and its derivatives refer to the connecting, adhering, bonding, attaching, sewing together, or the like, of two elements. Two elements will be considered to be joined together when they are integral with one another or joined directly to one another or indirectly to one another, such as when each is directly joined to intermediate elements. “Join” and its derivatives include permanent, releasable, or refastenable joiner. In addition, the joining can be completed either during the manufacturing process or by the end wearer.

[0031] “Layer” when used in the singular can have the dual meaning of a single element or a plurality of elements.

[0032] “Liquid impermeable,” when used in describing a layer or multi-layer laminate means that liquid, such as urine, will not pass through the layer or laminate, under ordinary use conditions, in a direction generally perpendicular to the plane of the layer or laminate at the point of liquid contact.

[0033] “Liquid permeable” refers to any material that is not liquid impermeable.

[0034] “Meltblown” refers to fibers formed by extruding a molten thermoplastic material through a plurality of fine, usually circular, die capillaries as molten threads or filaments into converging high velocity gas (e.g., air) streams, generally heated, which attenuate the filaments of molten thermoplastic material to reduce their diameters. Such a process is disclosed, for example, in U.S. Pat. No. 3,849,241 to Butin et al. Meltblown fibers can be continuous or discontinuous and are generally self bonding when deposited onto a collecting surface.

[0035] “Member” when used in the singular can have the dual meaning of a single element or a plurality of elements.

[0036] “Nonwoven” and “nonwoven web” refer to materials and webs of material that are formed without the aid of a textile weaving or knitting process. For example, nonwoven materials, fabrics or webs have been formed from many processes such as, for example, meltblowing processes, spun-bonding processes, air laying processes, and bonded carded web processes.